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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,012	12/19/2001	Masahiro Yasukawa	040076.01	9786
25944	7590	11/02/2004		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER QI, ZHI QIANG	
			ART UNIT 2871	PAPER NUMBER

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,012

Applicant(s)

YASUKAWA, MASAHIRO

Examiner

Mike Qi

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10,11 and 16-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10,11 and 16-25 is/are allowed.
- 6) ☒ Claim(s) 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 08/955,461.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Sep.22, 2004 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,767,827 (Kobayashi et al) in view of US 5,510,918 (Matsunaga et al).

Claim 26, Kobayashi discloses (col.4, lines 18–64; Fig.1) that a liquid crystal panel comprising:

- a pixel region having a reflecting electrodes (9) formed on a substrate (1), and a switching element (2,3,4) formed corresponding to each of the reflecting electrode (9);
- a capacitance electrode (20) (the capacitance electrode '20' must be made of a metal, also the data line '8' and the drain electrode '23' must

- made of metal, and functions as a shielding layer) formed between the reflecting electrodes (9) and the switching element (2,3,4);
- an insulating interlayer (such as insulating film 7b) formed between the reflecting electrodes (9) and the capacitance electrode (20) (functions as a light shielding layer);
 - a passivation film (11) formed by silicon oxide film covering the reflecting electrode (9) and the space between the adjacent reflecting electrodes (9);
 - the passivation film (11) and the insulating films (7a and 7b) (as an insulating interlayer) form a laminate structure at the space between the adjacent reflecting electrodes (9).

Kobayashi does not expressly disclose that the insulating film is silicon nitride film.

However, Matsunaga discloses (col.7, line 62 – col.8, line 20; Fig.8) that a liquid crystal display comprising a passivation film (PSV1) made from silicon nitride film or silicon oxide film, and the passivation film (PSV1) having a high passivation effect is made sufficiently larger than the insulating film (GI) for achieving more protection.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to arrange insulating interlayer of a laminate structure using silicon nitride and silicon oxide as claimed in claim 26 for achieving high passivation effect.

Allowable Subject Matter

3. Claims 10-11 and 16-25 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither discloses nor teaches a structure for a liquid crystal panel comprising various elements as claimed, more specifically, as the following:

a scribed region arranged on an outer side of the periphery region, a step formed between the periphery region and the scribed region, the laminate structure having a sidewall at the step; and a passivation film covering the sidewall of the laminate structure and comprising a silicon nitride film as shown in the Fig.4; and the periphery region having a step and a sidewall at the step, and the passivation film covering the sidewall as shown in Fig.4 [claims 10, 17, 20 and 23].

The closest references such as Kobayashi, Shintani and Shimada disclose a structure for a liquid crystal panel in which the peripheral portion having laminate structure, and the passivation film covering the reflecting electrodes, and the insulating interlayer comprising silicon nitride or silicon oxide. However, the prior art of record do not disclose a passivation film covering the sidewall of a laminate structure and a step formed between the periphery region and the scribed region as shown in the Fig.4.

Response to Arguments

5. Applicant's arguments filed on Sep. 22,2004 have been fully considered but they are not persuasive.

Applicant's arguments are as follows:

1) The references do not disclose a passivation film formed by a silicon oxide film and an insulating interlayer formed by a silicon nitride film form a laminate structure at space between adjacent reflecting electrodes as claimed in claim 26.

Examiner's responses to Applicant's arguments are as follows:

1) The references such as Kobayashi discloses (col.4, lines 18–64; Fig.1) that a passivation film (11) and the insulating films (7a and 7b) (as an insulating interlayer) form a laminate structure at the space between the adjacent reflecting electrodes (9) as claimed in claim 26, and the reference Matsunaga discloses (col.7, line 62 – col.8, line 20; Fig.8) that a liquid crystal display comprising a passivation film (PSV1) made from silicon nitride film or silicon oxide film, and passivation film also functions as an insulating film, that means the passivation film and the insulating film can be made from silicon nitride film or silicon oxide film, and that have been at least obvious.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (571) 272-2299. The examiner can normally be reached on M-T 8:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Qi
October 19, 2004


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER